IN THE CLAIMS:

1. (Currently Amended) A ceramic honeycomb structure comprising a plurality of through-holes surrounded by partition walls, wherein (1) a thermal expansion coefficient of an outer circumferential wall portion in the ceramic honeycomb structure is larger than a thermal expansion coefficient, in a direction of a diameter, of an inside partition wall portion in the ceramic honeycomb structure, and stress is applied to the inside partition wall portion from the outer circumferential wall portion, and wherein (2) a raw material for said outer circumferential wall is given in a thickness sufficient to apply a stress to the inside partition walls from the outer circumferential wall around a whole surface of the outer circumferential wall, and (3) the outer circumferential wall portion has been made of a crystalline cordierite.

2. (Original) A ceramic honeycomb structures as defined in claim 1, wherein a material for the outer circumferential wall portion of the ceramic honeycomb structure is the same as or different from a material for the ceramic honeycomb structure.

3.   (Previously Presented) A ceramic honeycomb structure as defined in claim 1, wherein a partition wall of the ceramic honeycomb structure has a thickness of less than 0.1 mm.

4.   (Original) A ceramic honeycomb structure as defined in claim 1, wherein the ceramic honeycomb structure has 62 cells/cm^2 or more.

5.   (Original) A ceramic honeycomb structure as defined in claim 1, wherein the outer circumferential wall portion is thicker than an inside partition wall portion of the ceramic honeycomb structure.

6.   (Original) A ceramic honeycomb structure as defined in claim 1, wherein the ceramic honeycomb structure has an open frontal area of 86% or more.

7.   (Original) A ceramic honeycomb structure as defined in claim 1, wherein the ceramic honeycomb structure has a bulk density of 0.26g/cm^3 or less.